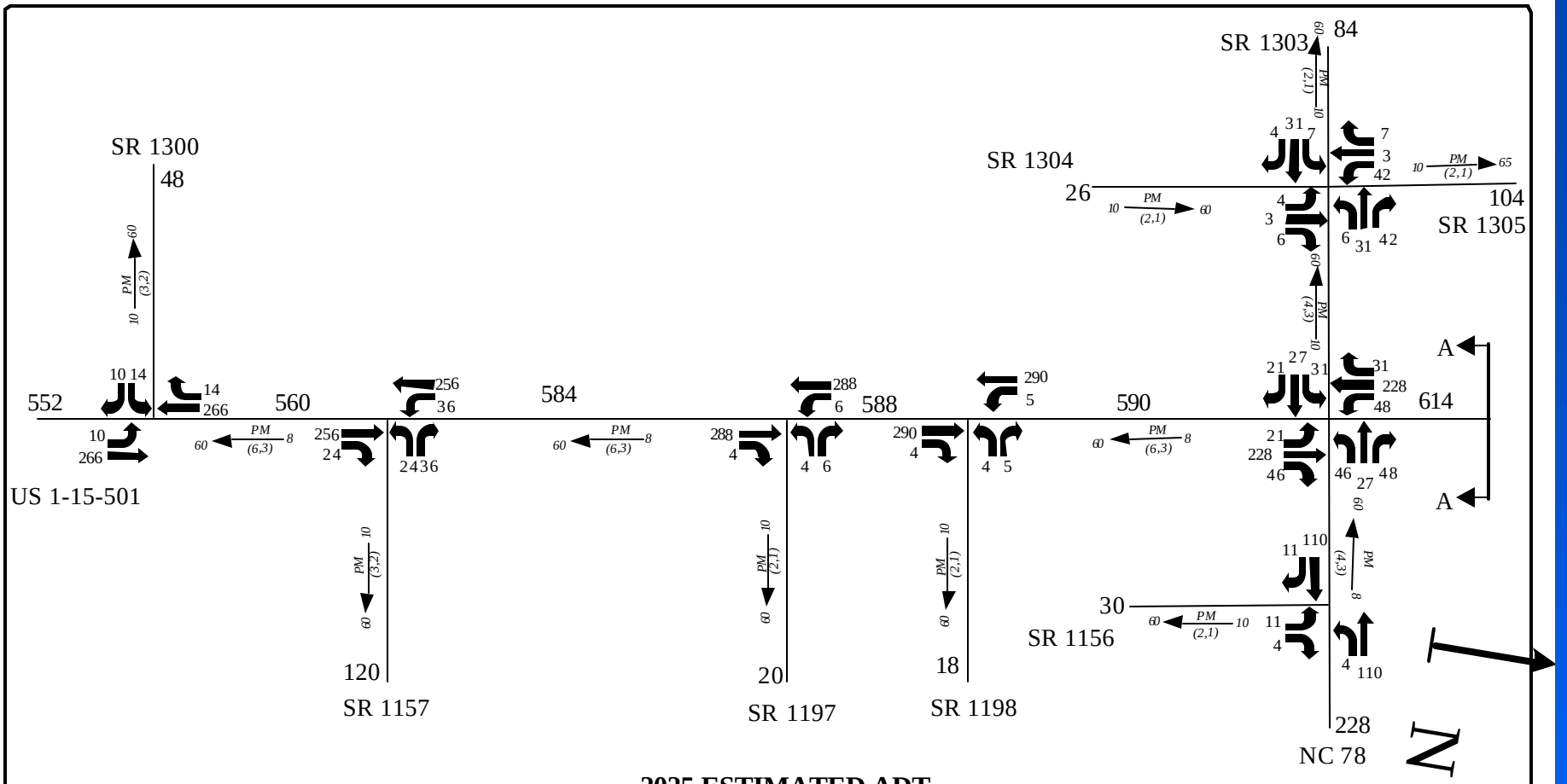
“Traffic Forecasting”

Fact and Fiction



2025 ESTIMATED ADT

ADT Counts in 100's

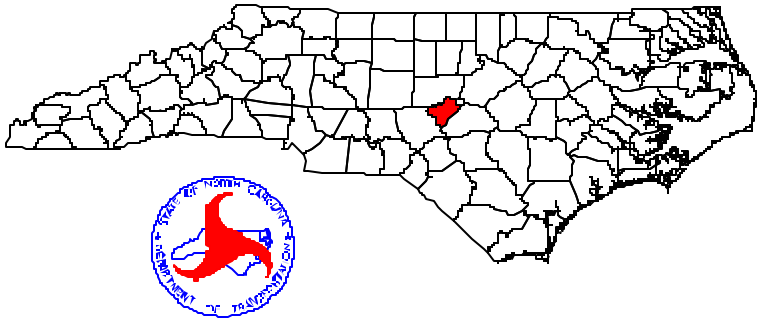
LEGEND

###	VPD----# OF VEHICLES PER DAY
###-	MUCH LESS THAN ### VPD
X	MOVEMENT PROHIBITED

DHV —PM (d, t)→ D

DHV	DESIGN HOURLY VOLUME (%) = K30
	K30 = 30'TH HIGHEST HOURLY VOLUME
D	DIRECTIONAL SPLIT (%)
PM	PM PEAK PERIOD
(d,t)	DUALS, TT-ST'S (%)

NOTE: DHV ——→ D INDICATES THE DIRECTION D. REVERSE FLOW FOR AM PEAK.



LOCATION:

Tramway area at the intersection of US 1-15-501 and NC 78/SR 1303

PROJECT:

Feasibility Study

COUNTY: Lee

DIV. : 8 DATE: May, 2002

TIP # FS-0108C W. O. #

Typical Uses of Traffic Forecasts

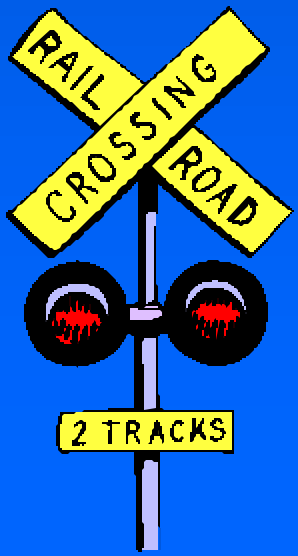
- Purpose and Need
- Cross Section elements
  - Number of Proposed Lanes
  - Shoulder Widths
  - Bridge Widths
  - Median Widths

Typical Uses of Traffic Forecasts (continued)

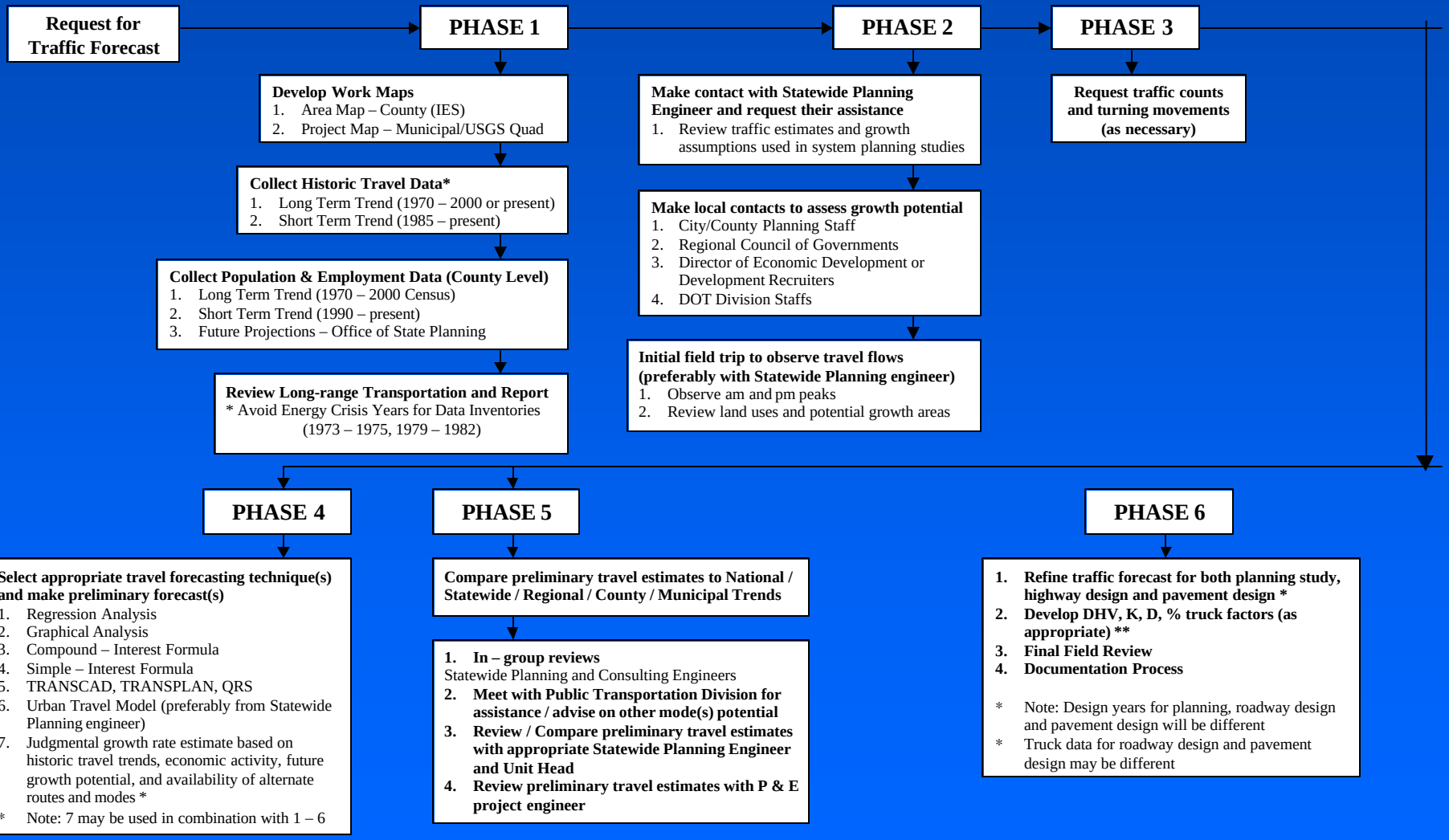
- Interchange Designs
  - Determine interchange type and configuration
  - Interchange Justification Study
  - “Over versus Under” studies
  - Spacing between interchanges
- Work Zones
  - Offsite Detour Analysis
  - Queuing lengths

Typical Uses of Traffic Forecasts (continued)

- Pavement
  - Designs
  - Types of pavement markings and markers
- Noise Wall warrants
- RR crossings
- Feasibility of Toll Projects



Traffic Forecasting Flow Chart



Phase Four: Select the Appropriate Tool to Develop Forecasts

- Turning Movements/Counts
- Past Trends (graphical, regression, compound and simple interest)
- Area Knowledge
- Judgement

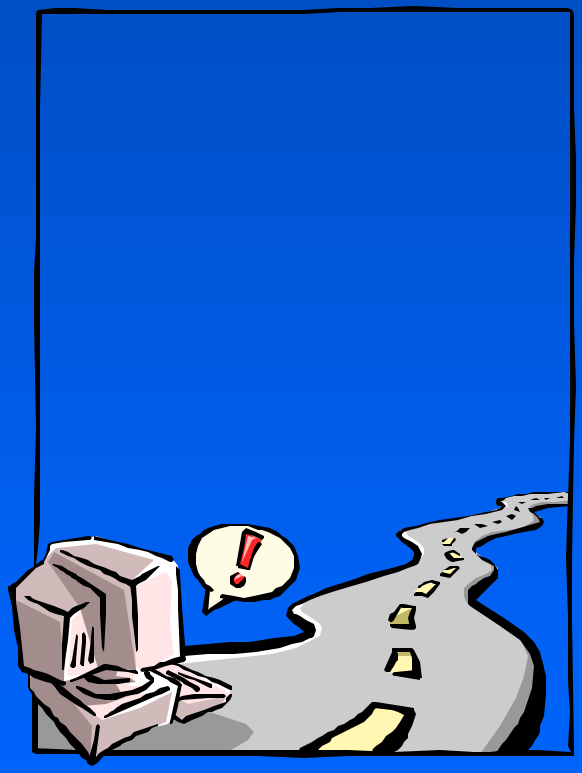
- Travel Demand Models

Models: Alternatives Analysis

Model predicts travel demand based on forecasted land use

- Location and characteristics of new households
- Location and characteristics of new employment
- Economic activity
- Land use patterns

Travel Models: A Means of Predicting the Unpredictable

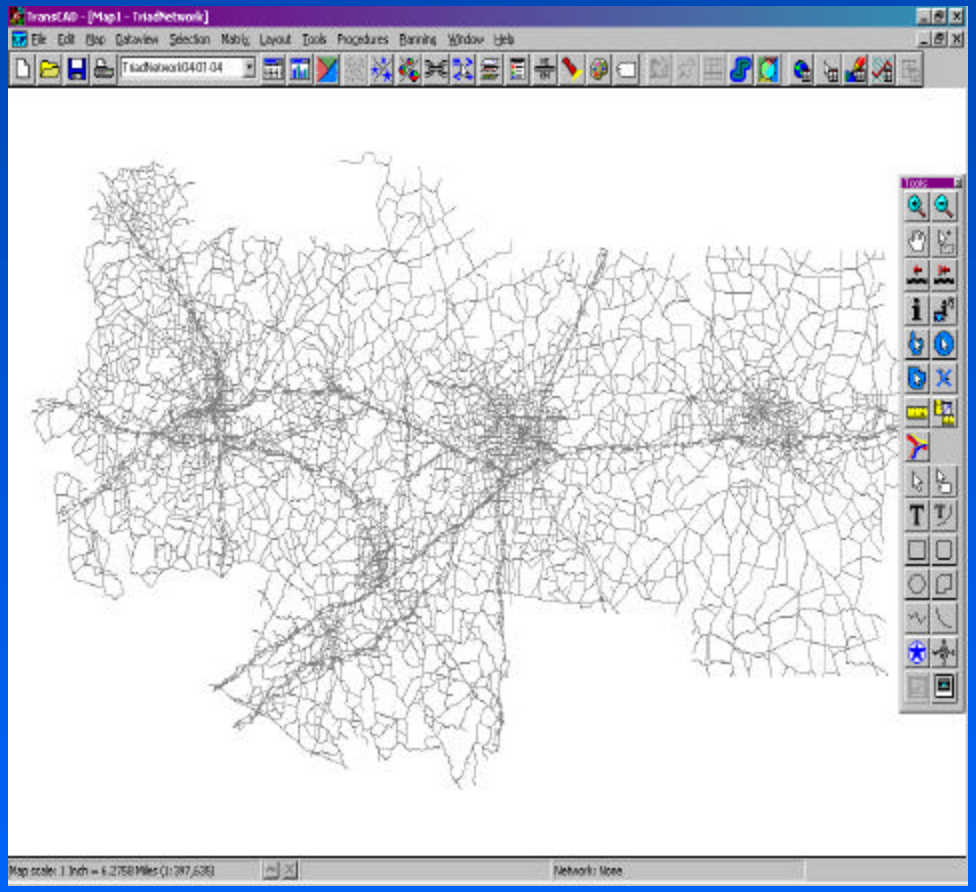


No model can take into account all of the factors that affect travel behavior and thus no model can perfectly replicate or predict reality

What do Models Provide Us?

- Travel demand models provide…
  - An isolated representation of a real world process
  - A means to systematically explore assumptions and complex systems
  - A check on judgement and intuition
  - A decision support tool - NOT a provider of the “answers”

Travel Models



Large Regional Areas or MPO's

Not all Roads Included

Systemwide Travel Patterns Replicated

Travel Models: What does it mean for forecasts?

We have to add further details to your project area-coding issues

Check landuse changes

Compare results for logic in that specific area

Determine the turns at all intersections- balance/compare them with other forecasts

Look at what is /should be assumed in the model for this forecast

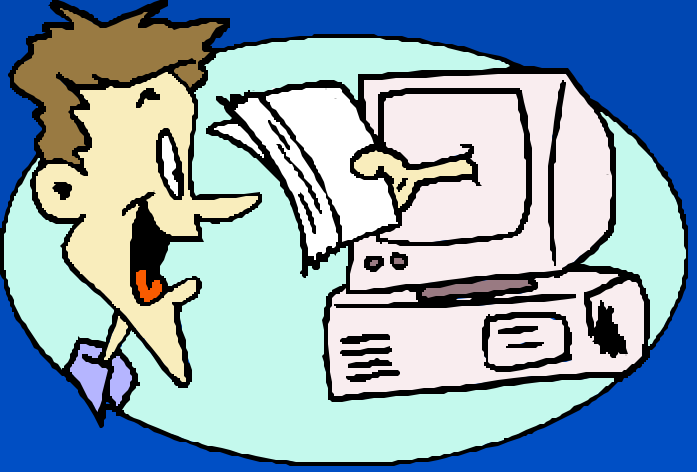
Travel Models: What does it mean for forecasts?

Change horizon years-not always interpolation

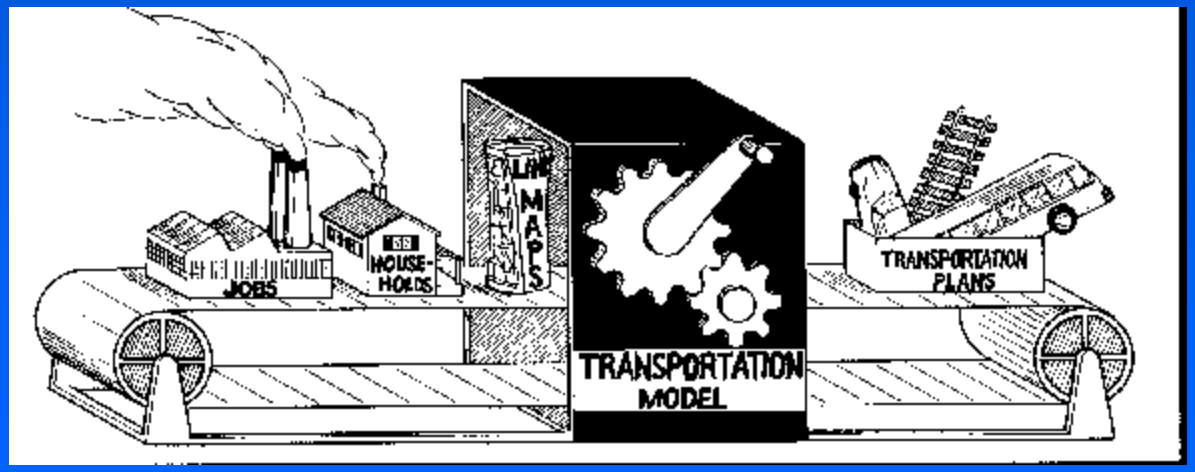
Change in alignment slightly can effect traffic- so we have to understand why the change occurred

Models:
Alternatives Analysis

Changes in alignment can change the selection of route because the characteristics of the path have changed



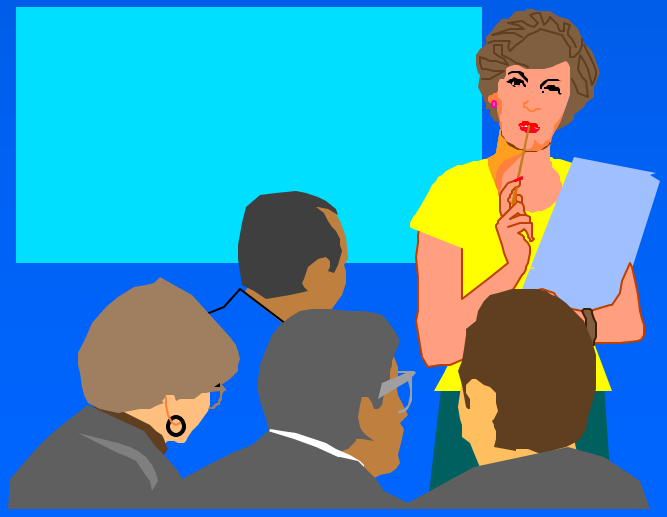
Can’t Just Push A Button and Get an Answer Unfortunately



We have to Crank Through the Details

The Challenges

- Public Input
- Resource Agency Request
- Outdated Original Forecast
- Updated Model
- Change in Project Scope
- The Judge Told Us To!!!
- Change in Project Limits
- Skeptical Public/Agencies
- New Transportation corridors
- Land Use changes



“The best example is I-485 in south Charlotte...County commissioners originally told the state that the county east and south of Pineville would always be rural and major roads were not needed. So the state designed a two-lane outerbelt.

But about five years before work began, the county reversed itself and agreed to allow the suburban developments found today in south Mecklenburg.”

The Charlotte Observer

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Questions?????